

U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF BIOLOGICAL SURVEY

Form Bi-689

FIELD DIARY

Mr. *Vernon Bailey*  
*Chief Field Naturalist*  
*Biological Survey*  
(Official title.)

Period, *October*<sup>18</sup> *1932* - *Nov. 24, 1932*

NOTICE

This book is Government property. The finder is requested to mail it to the BUREAU OF BIOLOGICAL SURVEY, DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C., or deliver it to the official whose name appears above. A detachable addressed frank will be found on the last page; by tying this on the cover the book may be mailed without postage or wrapping if fastened shut.

*Furaha*

For Work in Mexico, 1932-3

Outfit

Passports & permits

Guns & Ammunition, Flash light

Collecting chest

Traps

Tools, scalpels, pliers, scissors,  
dividers, measures, needles,

Supplies, Arsenic, cotton, tow, wire, pins,  
labels, tags, catalogues,

Oatmeal, cornmeal, peanut butter,  
beaver castor, wolf bait,

Stationary, journals, note books, paper,  
franks, wraps, colored pencils,

Cameras, films, flash light, ribbons etc.

Clothing, bedding, boots, rubber soles, bag.

Tent, pack covers, shipping bags

First aid,

Outfit, continued.

Saddles, spurs, ropes,

Flash lights,

~~First aid~~

Travellers checks -

Books, mammals, birds, plants  
Spanish dictionary.

Foods, Klim, baking powder,  
pea meal, coffee, tea, soap, candles,  
corn meal, bacon,

Oct. 18, 1932

Left Washington 3:50 P M  
B + O to Chicago and R.O. to  
El Paso, Texas to join  
Frederic Wentworth Jr. who flies  
down from Boston. for trip  
in Mexico, Chihuahua and Sonora  
collecting specimens and studying  
field natural history in general!

Warm and raining as I  
left Washington. Autumn colors  
in their prime and the wet  
leaves glowing like fresh paint.  
Sassafras and staghorn sumach  
like flame azaleas and the tulips,  
hickory, and elm like bailed  
down sunshine. With all the  
shades of red, oaks, gums,  
maples, sumach, dogwood and  
poke weed scattered through  
or bunched or massed the  
richness of color scheme of  
nature is unsurpassed.

It has rained heavily for about 36 hours and the fields are full of ponds, the streams high and rushing yellow mud until we get to Harpers Ferry where the Potomac of green water joins the yellow Shenandoah.

This country is beautiful and the green fields of wheat wheat and clover with brown cornfields, and yellow plowings all fit in to a magnificent picture, never attempted by any artist. Even the dim fog and haze of the misty rain softens and enriches the setting. Why don't artists give us the real thing instead of their puny imaginations.

Oct. 19 ~~wake up~~

Daylight came somewhere  
in southern Ohio and I  
had breakfast at 7 in Indiana  
after losing one hour.

It is foggy and hazy over a  
damp and brilliant picture  
of richly colored foliage,  
varied from the pale greenish  
yellow of the willows and cottonwoods  
and aspens to the golden hickory  
walnut, tulip, elm and yellowwoods  
to the red and browns of the  
oaks, The sumachs, and the  
grasses. Even the old dry  
weeds and dead marsh grass  
fill in masses of rich colors and  
go well with green and brown  
fields and yellow sand banks.  
Hundreds of miles of brilliant  
moving pictures in real color.

Arrived at Chicago 9 AM  
and left at 10:30

Went across farm country  
to the Mississippi River valley  
at <sup>where the old and</sup>  
unused canal joins it,  
up the valley to Rock Island and  
across to Decaturport.

The river valley has its own  
autumn color scheme, largely of  
the yellow tones, the pale yellows  
of willows, beeches, wild grape  
and bettsworth, the golden cottonwoods,  
ash elms, and honeylocust, and  
the flaming stagbarn and deep red  
smooth sumach. These are the dominant  
colors but many touches of red and  
brown and green come in in patches  
of white and purple asters and a few late  
sunflowers and goldenrods white.  
On the hill sides the purple and red  
and brown of the oaks are seen.

West of the Miss. R. we crossed  
big rich prairie country of  
Iowa till dark. The crops  
seem to have been fairly good and  
young cattle and hogs are being  
fed as usual. but not so many.  
No visible signs of depopulation  
except in the towns which  
seem rather vacant and many  
buildings empty.

Sunset on the day prairie with  
smoke and dust and haze in the air  
was a gorgeous color display,  
ranging from light yellow and puffs  
to deeper yellow and orange and  
flaming red as the last streak  
smoke into the horizon.

The sky seemed to be carrying  
all the pigments or primary  
colors of the autumn foliage  
reflected back from the earth.

Oct. 70. Sunrise on the  
short grass plains near  
Pratt, Kansas. A cold,  
foggy night but the bright  
sunshine soon warmed the  
air.

Crossed the Cimarron  
and up onto the Staked Plains.  
Tumbleweeds and Kaffir Corn the  
principal crops. Grass short  
and dry, not making cattle  
and not good for mowing.

Darkhart and on our edge  
of plains - down to lower and  
rougher country.

Lagan, lots of low  
mesquites, Cotton bolls at  
gin. Bush cactus and narrow  
leaved sagebrush. Sandy soil.  
Lower Elevation of the Cimarron Valley.

Santa Rosa, Same old town,  
Picturesque country. Good grass.

Up on the big plains west of Santa Rosa but dark before we reached the mountain ranges.

Arrived at El Paso 11:55 PM and went to Hilton Hotel, new and modern and 17 stories high with a great view of the mountains on both sides of the Rio Grande valley and far up and down the river. Raining when I arrived. There has been much rain and the desert is unusually fresh and green.

The cottonwoods along the Rio Grande valley are still dark green with scarcely a trace of yellow and many fall flowers are in blossom.

El Paso  
Oct. 20. Found Freddie Wintrop  
and his friend  
at the hotel when I came down to  
breakfast. They arrived at this  
morning on the train. Gave up  
flying down because of bad weather.  
Raining for several days.

Colder and cheer this morning.  
44° above zero, the coldest this  
year and unusually cold for the  
time of year.

Spent the day trying to get  
our papers fixed up for entering  
Mexico but did not get far done.

Lunched at Juarez and visited  
at The Mint, and visited the  
Casino where gambling is  
going on at full blast.

Many Americans at both places,  
largely women and girls,  
drinking and smoking and gambling.  
Not an attractive set.

Oct. 22, El Paso, Saturday  
Worked fast to get our papers  
fixed up and bonds made out and  
money deposited at the Mexican  
Bank (\$750) as surety that  
we would deposit our set of all  
our specimens in the Museo  
Nacional of Mexico City when  
they were classified and named.  
Got it all fixed up at  
a little after 2 PM when the  
offices closed, and are ready  
to start for Mexico in the  
morning.

Went out and called on Mrs  
and Capt. Slater at 514,  
Prospect Ave. in this very  
interesting home. He is an  
artist and sculptor and she a  
botanist and all sort of naturalist.  
Her desert garden is most  
interesting.

Oct. 23, El Paso, Texas,  
Sunday morning, warm and  
hazy and delightful for a  
drive to Carrizalitos, around  
by Columbus, New Mexico,  
and Palomas. then 90 miles south  
to the old Rancho Carrizalitos

The whole trip is in Lower Sonoran  
zone mesquite, creosote, catclaw,  
*Yucca radiosa* and *Yucca macrocarpa* and  
all the plants that go with them.  
Chaco over the tops of all ridges crossed  
south of the line. No ridges north of  
the boundary. Many little mountain  
ranges all around that seem to be  
upper Sonoran or at least cold slopes  
but no pines, nut pines or oaks  
in sight of the road.

Lake Palomas is in a big valley  
full of good grass as are all the  
valleys along the way. The valley  
land is rich and the grass grows  
over the flat country and fine grass and

bunch grass on the ridges.  
Even *Eurotia lanata* and *Atriplex*  
*canescens* and another finer leaved  
*Atriplex* are abundant. There is  
no sign of overgrazing although  
hundreds of cattle are seen in  
the valleys, all fat white face stock.  
I never saw such a cattle country  
as all of these big valleys but especially  
the Cañalitos Valley where the  
one or two companies control or  
own about a million acres of land.

There have been recent rains  
grass and most vegetation is green  
and fresh and there are many  
beautiful wild flowers, mostly yellow  
composites but some pink and  
purple asters and flame colored  
*Malvastrum*. *Gutierrezia* is  
just coming in flower but  
apparently a second flowering.  
Some of the new quites are full of rippears.

Saw Onychomys leucogaster  
yesterday near El Paso and  
today one Citellus spinosus just  
east of Denning. Lots of burrows  
and mounds of Dipodomys deserti  
and the smaller kangaroo rats,  
Pocket gopher hills all along  
A few black rabbits and in  
Mexico 4 Coyotes.

## Pacty

Fredric Winthrop Jr.

Erigenio Padilla, "Asico"

Trinidad Padilla, "Ateina"

San Pedro Carralitos,

Geo. W. Houghton, Foreman of Carralitos Ranch

El Paso, Texas, 1223 Mills Building

Richard Trimble, Vice Pres. Carralitos Co. New York

## Oct. 24 Carralitos, Chihuahua

Awoke in the great adobe sand house of the Carralitos' million acre ranch and mine.

The endless number and extent of adobe walls and buildings and corrales and plazas on all sides of the big main four square house with a patio 60 or 70 feet square in the middle full of flowers. The buildings are old and massive and dark and one old store room has a ton of bat guano on the floor and a strong smell of tobacco but no bats could be seen in the ceiling.

Great heaps of slag have been milled from gold & silver ore from across the valley, and hundreds of huge alamo trees grow all among the buildings and along the Casas Grandes River which runs thro the valley.

Here Pancho Villa killed the owners  
and tortured and whipped and hung  
and shot the employees to make  
them give up gold or secrets  
and destroyed property, killed  
cattle and stab horses and later  
Pershing quartered his 3000 men  
on his penitentiary raid into Mexico.

The big valleys are all lower  
Sonoran zone, well watered  
and heavily grassed, a paradise  
for stock and with unlimited  
possibilities in agriculture for the  
soil is rich and abundance of good  
water only 6 or 10 feet below the  
surface. Little rough desert  
ranges on all sides but rarely  
high enough for timber or much  
upper Sonoran vegetation.

Oct. 25 Went to Casas Grandes  
to get stuff at the store for our trip  
but found only the worst possible  
stock of goods and not half what  
we needed. Got flour and beans  
and coffee and salt and sugar and  
peloncilla but no bacon or pork  
or lard or corn meal or dried  
fruit or vegetables except a few  
potatoes and onions. Much corn  
is raised but but parched and  
eaten. Beans and squashes and  
chili are seen at the houses  
on the little farms.

Set traps and hunted and  
found kangaroo rats and pocket  
mice and signoras abundant.

Oct. 25 & 26 & 27. Collecting at  
Carrizito -

Oct. 28 Packed up & left for  
Sonora, camped at Rancho  
Ramos, 12 miles.

Mezoid at Carrizito 4700 feet

" " Ramos 4900 "

All Lower Sonoran valley  
country. See list of plants.

Camped at big springs of good  
water under huge old cottonwoods  
with grassy flats all around and  
a big creek of water running down  
through the ranch.

A hot day, rode all day in dirt  
shoes.

Oct. 29 Stayed <sup>Rawas</sup> all day at camp,  
collecting and making up specimens.  
Went to big shallow cave at north  
end of butte just north of Rawas  
but could not scare out any bats  
tho fresh droppings from roof.  
Has been lived in and used by  
stock. Would be worth excavating.  
Many new plants, *Momisia pallida*,  
*Lippia*, *Flourensia*, *Eotol*, *Acacia*,  
*Rhus microphylla*, *Opuntia* and  
much mesquite. Good grass  
everywhere and lots of cattle.  
A few new birds but all lower  
Sonoran vegetation.

Oct. 30, Ramos, Sunday,

Got up long before daylight for an early start but our horse and one mule could not be found until about 9 AM, and did not get off till 10:30.

Traveled over ridges and valleys SW about 15 miles to Yopacitas Creek and camped before sundown with Cottonwoods, a new fine leaved willow, Sycamores, walnuts and Chokecherries barked junipers. only a few miles from bigger timber in the higher mountains.

Left Lower Sonoran species about half way on this trip, in the west arm of Ramos Valley and not over 10 miles east of base of main Sierra Madre. Upper Sonoran part of valley all grass. Junipers and blue oaks begin at camp.

Came through one big prairie  
dog town, about 40 acres,  
5 miles before camping.  
in upper Sonoran zone.  
Also two *Lepus gambelii*,  
on tops of highest grass  
plains in upper Sonoran  
collected one. Habits  
much as in campanas.  
hid in grass by squinting  
flat and I caught one for  
horseback.

Aneroid at Rawas read  
5130 ft at ~~Rawas~~ in morning  
ad 5800 at camp. 5 PM

Oct. 31, From Zapaditos Creek over  
ridges to Zunaja Creek about 5 miles  
and struck it about 5 miles above  
Colonia Juarez. Then followed  
up the creek about 10 miles to  
the Ranchos de las Lobas at  
6,200 feet and camped in  
lower edge of Transition zone  
where yellow and Chihuahuan pines  
and narrow leaved cottonwoods  
begin and close to the top of the first  
high ridge of the Sierra Madre,  
about west of Juan Garcia-  
Mahmets, sycamores, grayed ency-  
oaks and chiderback pinyons  
reach up to a few miles below  
camp and the oaks and pinyons  
far above on warm slopes.

Nov. 1, Monday.

Followed west up Teraja Creek about 10 miles to very end, then over a low saddle at 7500 feet with main ridges 500 to 1000 feet higher, then down west slope along a steep gulch on old and very rocky road about 1000 feet lower, then over a ridge at 7500 feet and down to the town of Tamasopo on the San Pedro River at 6250 feet in a big yellow pine valley with timbered mountains all around. <sup>about 20 miles</sup> higher on the west. All Transitions gone all day except south slopes where the *Juniperus pachyphloea*, *Pinus emboidea*, blue oaks, manzanitas and *Arceuthobium* go up to at least 8000 feet on south slopes. *Emery oak* does not go so high. The flat valley at 6200 feet and all northerly slopes are yellow and Chihuahuan pines, narrow leaved cottonwoods, cherry and maple see lists of plants & birds.

Nov. 2 Travelled west from  
Tomasanda 5 miles to west branch of  
San Pedro River and up it west  
5 miles farther and camped near the  
last water at 7250 feet by my  
mussel, 7100 by Wuthrops.  
Camped at 1 PM in beautiful pine  
woods in pure Transition zone  
which covers the top and all  
cold slopes down to Tomasanda  
at 6250 feet. In fact we have  
been in Transition zone all day  
and all day yesterday except on  
steep south slopes where blue oak  
and checkerboard junipers go to near  
5000 feet. Usually upper Sonoran  
stops about 7500 on not very steep  
slopes. Transition zone runs  
to top of range in extension of  
beautiful forest of shaved yellow  
pines, Chihuahuan pine, Locust  
and ash.

In two northeast gulches at about 7500 feet small groves of aspens were found but no other Canadian zone species. Douglas spruce and southern white pine are common and the little leaved *Abies grandidentata* up to near the summits.

Winthrop climbed the highest peaks along this part of the range where his aneroid read up to 8650. It generally reads 200 to 400 feet higher than mine.

Set gopher traps and got the blackest form yet, also caught a big *Peromyscus* and one *Neotoma* that seems to be univittata.

Several little white tail deer were seen but none collected and one bunch of *Marus quail* was seen but none secured. No turkeys. Cold nights but clear and beautiful days.

Nov 3. Remained at camp  
taxidermy and trapping and making  
up skins,  
Apaches never found us.

Nov. 4 Crossed over the divide  
into Sonora about 5 miles  
west of camp at 7800 feet  
by my aneroid and 8200 by  
Winthrop's, then pitched down  
steep dry stony slopes to the  
west over old mining good and  
washed out trail to the old  
abandoned mine of Das Lagos  
at 5500 feet, then 5 miles farther  
along the creek and camped at 5000  
feet in a canyon of Sycamores,  
Walnuts, live oaks, cypress, madroño  
and on hot slopes some *Prosopis*  
*pubescens*, Catalpa, *Rhus viridis*,  
*Agave palmeri*? *Opuntia engelmannii* and  
*bassilensis* and along the creek 2 species of  
Tall *Baccharis*.

Were evidently close to the edge of Lower Sonoran zone but not fully into it except on hot slope up to 5500 feet.

Upper Sonoran runs from 5500 to 7500 on south slopes and 1000 feet lower on north slopes. Transition runs 6000 N.E. to 8500 and from 7500 to tops of peaks at 8500 on south slopes.

Came down 3000 feet today with corresponding rise of temperature.

A dry steep slope but untouched grass until we came near Las Cajas where a few cows were seen and were at a Mexican ranch below and just above camp, still good feed for our horses.

Set traps in canyon and wrote up a few notes.

Saw one big yellow bellied fox skinned above Las Cajas but did not get it.

Nov. 5, Saturday,

At camp 5 mi. below Las Vegas  
aneroid read 4900 feet but we  
went over ridges 5000 feet  
higher, then back into the same  
canyon at 4100 feet and down  
in 5 miles to 4150 feet and  
camped, still 8 miles  
East of Basaraca.

Lower Sonoran species reach  
up on south slopes to 5500 feet  
but most of the country is  
Upper Sonoran with blue oak,  
Emory oak, *Juniperus pachyphloea*  
and *flaccida*?, over the ridges,  
and sycamore, ash, walnut,  
cottonwood, willows, hacheberry,  
*Cupressus*, *Juniperus* along the  
creek.

*Prosopis pubescens*, acacia, mimosa,  
*Amelanchier*, *Rhus virens*,  
and other lower Sonoran plants  
on flats and hot slopes.

Came very slowly over stony trails  
and did not make 15 miles.  
We on the trail went all day.  
The blue oaks are loaded with  
acorns on the ridges, the first  
seen. Band tailed pigeons are  
feeding on them. also rock squirrels.  
Agave <sup>parryi</sup> ~~patrici~~ abundant and big  
Found a little <sup>Agave hartmanni</sup> ~~Agave~~ 2 to 6 inches  
high in dense heads but no fruit.  
Leaves serrated. Agave hartmanni.

Thurberia common in canyon  
but no bell weevils found.  
Country rough and stony and  
picturesque. Very dry but  
good grass and good water  
in creek. One little Mexican  
ranch in canyon.  
Some cattle all along.  
but not many.  
Hot day, No frost yet.

Nov. 6, Sunday To Basacaaca.

Get camp on creek 4150.  
Up over hills and down into Bavispa  
Valley to Basacaack, about 9 miles.  
River at Basaca 3600.

A big open valley about 10 miles  
wide and 50 or 75 long, north and south  
all Lower Sonoran zone well up  
onto the mountain sides.

Upper Sonoran hills on the west,  
but no high country in sight.

The Bavispa River is now at  
the lowest season two feet deep  
and 100 yards wide, running  
rapidly with clear mountain water.  
The irrigation ditches are all full  
and large, several on both  
sides. The sandy flats bear  
lots of cottonwoods and aye amores  
and almonds and willows along the  
river and ditches and the rest  
of valley dry mesquite plains.

Nov. 7, Remained at camp near  
Basarack and set more traps  
and made up the specimens from  
the morning's catch - a *Perognathus*  
*hairyi*, *P. eremicus*, 3 *Spermophaga*  
*eremicus* and a *Thomomys*.  
Also had a lot of back skins  
to make up.

A hot day but we had the  
shade of cottonwoods and ash  
by the irrigation ditch.  
Set traps on flats in P.M.

Nov. 8, Camp at Baco ~~3400~~

by Winthrop aneroid 4050.

At Huachinas 3600.

At camp 4 mi. W. of Huachinas  
3950, Winthrop 4600.

Came about 16 miles and camped  
late. Just time to set out a  
few traps before dark.

In morning caught 3 *Sigmodon*  
2 *Peromyscus* and two *Thomomys*  
Lots of *Dipodomys* and *Peromyscus*  
not *Perognathus* on the sandy  
flats would not trap our bait  
and not one was taken.

Killed a big yellow bellied  
fox squirrel before  
reaching Huachinas and  
saw tracks in road.  
It was in a hackberry tree.  
No nests or acorns this year.  
All dead.

all lower Sonoran zone  
all day except in cold  
gulches where a few  
Blue oaks are found.

*Prosopis juliflora* is the  
dominant tree of the valley  
and gets very large in  
places, 2 ft in diameter  
and 40 ft high.

A large acacia like *Acacia*  
is common and *Acacia*  
and two mimosa are abundant.  
The valley juniper is a species  
new to me and abundant in  
lower Sonoran zone.

It is often full of a small short  
leaved *Tillandsia* which also  
grows a little on *Quercus* and *Mimosa*.

Followed up the river much  
of the day but from *Hesperomys*  
turned up west part and camped  
at last night.

Nov. 9, Camp 4 mi N of Huatimaco 8950

Divided toward Opatun 5100

Camp on west slope 4300

Caught 3 *Thomomys* and a *Perognathus*  
and Winthrop shot 3 more big fox  
squirrels.

Made up specimens and packed  
horses, a sore backed mule for a  
good horse. Started about 11  
and came about 15 miles west  
up washes and over ridges to  
summit and then rapidly down  
toward the Batavia River valley.  
Saw little wild life. plenty  
of Coon tracks and one  
Coyote track.

A warm day but frosty  
in morning.

Left Lower Sonoran zone  
on SW slopes at 4500 feet

And struck upper Sonoran  
at 4000 feet on NE slopes.

Lower Sonoran marked by  
Mesquite, *Acacia*, *Opuntia*,  
*Sotol*, *Agave palmeri*, *Opuntia*  
*englemanni* & others.

Upper Sonoran Blue oak,  
Eucalyptus, Juniper, *Rhus typhina*,  
Mangrove, *Ceanothus* -

Camped in deep gulch flowing  
westward under large dead fir oaks  
and pines, Good water at intervals  
along the wash, much stock and little  
grass. No signs of any mammals  
and few birds. Set no traps.  
Picturesque country but very  
rough and stormy and dry.  
Dreary weather.

A hot day.

Nov. 10 Camp in morning <sup>3440</sup>~~3450~~.  
Came over many ridges, the highest  
4600, but kept coming into lower  
gulches until we reached Opito  
at 2250, (3100 by Winthrop)

Left last traces of upper Sonoran  
on cold slopes at 4000 feet  
oaks, junipers, wanzanitas  
Rhus,

Lower Sonoran went up on  
hot slopes to 4500 and on flats  
to 4000. Many new plants  
came in. A little Giant cactus  
in great abundance from 4000  
feet down to the bottom edge  
of valley at 2300 feet.  
The Fouquieria tree, elephant  
tree, Iron wood, (Olneya) and a  
lot of other Mimosaes and Cereals  
and Juncos & Poles began  
at 3500 feet and come to bottom

Nov. 1<sup>st</sup>. Remained in camp a mile from  
Opote and set a lot of traps besides  
making up all skins to date.  
Had part of the big fox & squirrels  
cooked and they were delicious, a  
good change from tough beef fried  
in grease.

The river here is about the  
same as at Backarak but not  
so clear and pure. Still it is  
good drinking water and runs  
if straight from the irrigation  
ditch that runs through camp.  
Cottonwoods, willows, baccas of  
3 or 4 species and tobacco tree  
cover the flats.

Feed for the horses is poor  
but we give them plenty of corn  
so they will gain while resting.  
People most friendly and very  
helpful in every way possible.  
Got 50 oranges from the trees at Laramie  
but the regular price is 100 for 50 cents.

Mar. 12 Camp, Uneidod 2050  
Caught *Perognathus* and *Sigmodon*  
Set more traps, wrote some notes  
Dr. Geo. J. Ackers<sup>man</sup> and his son  
Joe called on us and gave  
us much good information.

Slightly cloudy but warm  
There has been a slight frost  
as shown by the bean vines but  
nothing else is injured. The  
corn and sugarcane are still green  
and growing and many flowers are  
in blossom. A few hummingbirds  
and bats and many insects are seen.

Opuntia in Bavispa Valley 2100 ft

Pecari - a few in hills among oaks.

Whistleduck, a few in mountain both sides

Wheeler, said to be a few.

Allerjaded rabbit, common, 2 taken in pair

Jack rabbit, said to be a few

Cottontail, common in valley

Rock squirrel, common.

Neotoma "

Peromyscus 2

Onychomys longicaudus 1

Sigmodon, numerous

Perognathus "

Dipodomys none

Thomomys "

Coyotes common in valley

Lobos, " in Mts 19 taken on hill

Lions " " " 18 taken "

Lynx "

Gray fox "

Raccoon abn.

~~Procyon~~ ~~skinn~~

~~Skunk~~ ~~skinn~~

Other, a few.

Nov. 13, Opuntia, Camp 2100

Caught a lot of small stuff but nothing large.

Made up skins and moved camp 4 miles up river and camped at 2150.

Set traps. Got another *Lepus alleni*, a white winged dove and an Arizona quail. Saw two sheldrakes.

Orange trees are loaded with fruit but not very ripe. We got 100 for a peso.

Sugar cane is green and growing, peanuts are ripe but badly eaten by cottontails.

One young fellow who has been to agricultural college for 6 years has a nice farm well managed with alfalfa and varied crops and fruit.

Birds of Barro Colorado Valley at Opato

Mergansers 2  
Ducks, said to be a few  
Killdeer a few  
Great blue herons, common.  
Gambels quail, common.  
Mearns quail, in foothills  
White winged dove common  
Mourning dove abundant  
Turkey buzzard com.  
Black Vultures "  
Horned owl, heard  
Spotted owl heard  
Screech owl "  
Red tail hawk, a few  
Marsh hawk, common.  
Sharp shins, a few seen.  
Flickers com.  
Gila woodpeckers "  
Dryobates sedens a few  
Mearns Wks. in foothills  
Geopelia "

Nov. 14 Got a lot of *Perognathus*  
and a *Peromyscus* & *Neotoma* and  
the men caught 2 coons and a  
hooded skunk with the dogs.  
So with some of yesterday's catch  
to make up I had a long busy  
day but nearly finished.  
Did not set out any more  
traps so we can move on  
tomorrow if we want to.

There are said to be both  
beaver and otter in the river  
near here but we have no large  
traps for them and they are not  
important any way.

Would like to get the 3 other species  
of skunks, tho we have the skin of  
a *Spilogale* and can well guess  
at *Conepatus* and *Mephitis*.

There was a heavy frost in the  
morning that killed the peanut vines.  
A hot day but cold again in evening.

Hummers	2 seen
Roadrunners	com.
Sayornis sayi	a few
" nigricans	"
Corvus sinuatus	abundant
Brewer's blackbirds	"
Madro Parks	com.
Shrike	a few
Archibuteo	"
Kinglets	"
Junco	"
Belted wren	"
Cactus wren	com.
Rock wren	"
Thrasher	a few
Mocking birds	com.
Phainopepla	1 ♂
Verdin	many nests
Poliophtila	com.
Pipilo maculosa	"
Amphispiza bilineata	com.
" nevadensis	"
Zonotrichia	"

Nov. 15 Camp near Opato 2100

Up river about 6 miles, then over ridges NW about 10 miles and camped half way to Navazari at 3000 feet. Came over ridges 3000, 3200, & 3400 feet but all Lower Sonoran with mesquites, Ocotillo of 2 species, little giant cactus and other lower sonoran plants to summits. A few velvet leaved oaks on highest NE slopes and on ridge west of us. No Transition timber on any ranges in sight. Bavispe River has broad valley to north and south but cuts across so there is no road and only trails and a few ranches to north. A rough, picturesque desert valley. Much stock and little grass.

Nov. 14 At camp merced road in morning 3100  
Followed up wash to little farms and old mines  
to 4400, then over divide at 5600 feet  
and peaks up to 6000 on both sides.  
Then down to Pilares at 5000 feet  
and 3 miles beyond to camp in wash  
at 4000, near Nogonia.

Came about 24 miles.

Water in many places along way  
but most of it strong of alum and other  
salts and unfit to drink. Good grass  
in many places.

Lower Sonoran up to 4500 feet and  
a little to 4600 on S slopes while upper  
Sonoran comes down to 4000 on N slopes.  
In NE Canyon yellow pines and Chinlewood  
pines come down to 4500 feet  
and cover steep NE slopes to top of range  
at 6000 but in a very narrow, broken  
strip. A new aspen with white bark and  
elliptical leaves abundant before reaching  
divide. Country very rough and picturesque.  
Full of minerals, places big old camp.

Nov. 17. Came about 4 miles to Naacari  
got supplies and went 5 or 6 miles west on  
road to Magdalena.

Camp in morning 4000,

Naacari 1082.50 meters on station.  
which equals 3518 feet.

Oversight of Naacari 3800.

" at camp to west 4300 feet.

Came west over very rough trail  
and down into good grass valley and  
camped by tenaja in rocky arroyo.  
at dark.

Country all lower Sonoran zone  
except a trace of upper on north  
slopes on ridge. Mesquite, *Ocotea*  
*constricta* & others, *Opuntia* cf *Borealis*  
abundant.

Nov. 18, Camp 4500  
valley sloping south 3900  
up valley to north about 5 miles  
and camped at 3600.

Came about 10 miles.

All pure Lower Sonoran all day  
with much big mesquite, Acacia,  
Zizophora, Cordia, Ocotilla  
and Faeacius. Walnuts and  
Celtis and a few cottonwoods  
in arroyos.

No open water but big wells  
where cattle are watered.

A warm day.

Made up specimens -  
Good automobiles road up  
valley.

One big coon track along  
dry road about 5 miles.

One flock of Gambel's Quail -  
Much stock, good game except  
near water.

Nov. 19 Camp in morning 3600  
Rancho north on good road  
about 10 miles, over ridge at 4200  
then down west slope into edge  
of Sonora River Valley about  
5 miles and camped in big  
gulch by good water at 3400.

All Lower Sonoran gone except  
north slopes above 4000 feet  
where oaks and cedars are abn.  
Magnolias, casahuate, Acacia,  
and ocotillo abundant.

Grass fairly good, some  
stock and little water.

A few cattle ranches where  
water is pumped for stock.  
No farms. Very dry.

Low mountains both sides  
of valley with some upper  
Sonoran timber.

Apr. 20. Camp in gulch 3600  
Down wash and stream to west  
about 10 miles, then south on  
good Auto road a mile to  
Chinipas, on mesa above the  
Soria River, River 3000,  
Town 3100. Camped in field  
near town.

All day in Lower Sonoran  
Zone, Mesquite, Acacia,  
Mormia, *Celtis reticulata*, Walnut,  
Ash, *Agave*, cottonwoods,  
*Condalia*, *Zizyphus*, *Lycium*,  
*Opuntia fulgida*, *O. engelmannii*, *tuna*,  
*Acotillo*, *Baccharis*, 4 sp.,  
*Salix* 2,

Corn and beans + pepper raised,  
Oranges at Arizpe, 15 mi. S.  
*Zobovans* 2 in canyon, Cardinals,  
*Perisoreia*, *Zenaidura*, *Scardafella*,  
*Cactus wren*, *woodpeckers*, *Thrashers*,  
*Verdin*, *Poliophila*,

Nov. 21 Camp at Chinapa

Witherup went to mine shaft some 4 miles NE of Chinapa where bats were said to be. Got 80 *Otophrynus* from back end of shaft about 100 feet in where they were hanging to roof and walls but very active. Were shot and killed with bush at entrance and many flew away. There were apparently several hundred. Some were brought back alive and photographed.

An old Neotoma and two half grown young were also killed in the cave and a gray, banded rattlesnake. I got three *Thamnophis* and a *Sceloporus* near camp, and a few specimens were packed ready to catch stage to Cuernavaca in morning.

Cold and frosty in morning, hot day. A small river of good clean water. Valley bottoms narrow and no extensive agriculture. No oranges or sugar cane till south at Acapulco.

Nov. 22. Cold at half inch of ice in bank.  
Soon warmed up. Camp by Tovar River 3200  
Left for Canimela about 8 AM by truck,  
Thank good road from Nazari in  
about 20 miles and over ridge at 4000  
Then down grade to Bochilipe at 3500  
feet on the Sonora River where there is  
much water flows as at Chinipas.

Then over ridges up to 4000 and 4600  
feet with all upper Sonoran zone  
on both slopes. Cananea 5300, Potosi 5600

An almost continuous mountain range  
on east but in 3 sections, the southern  
called Baños Mts. the middle Sierra  
Matanzas, the northern Sierra Ospey.  
They appear to run from 6000 to 7000 feet  
high with narrow dry rocky crests and steep  
slopes. They are covered with oaks and  
junipers on the <sup>SW</sup> west slope to the top  
but taller pines show along the high  
crests, indicating transition zone on the  
cold slopes. The Sonora River comes  
out of them.

Badger, a few  
 Rabbits  
 Skunks  
 3 guinea. cows.  
 a few  
 New Mexico weasel,  
 Taxidea,  
 after in woods, per year

Nov. 23 At Cananea packing specimens.  
 Empty sheet and made up notes.  
 A big grassy upper Sonoran plain  
 around Cananea Mts. Many *Dipodomys*  
*opisthotectus* mounds, a little *Stemodia*  
 mesquite on south slopes. Lots of *Crotalaria*

Nov. 24, Started for Magdalena, Arizona (5400)  
 Down into west fork of Sonora River to 4300.  
 Big mesquite valley, full of good grass  
 and good cattle. Wonderful winter range.  
 Over low divide about 4400 to head of Magdalena  
 River and down through Kentucky Canyon to 3600  
 feet, then through Manhus Canyon to 3300  
 feet, then in open valley country to Immovis  
 on the Nogales road at 2850 feet and to  
 Magdalena at 2600 feet at 4 P.M.

Fairly good road all the way.  
 Giant cactus began in Manhus Canyon at  
 3300 feet, also the little giant cactus, Centillo,  
 Palavida and many others of the lower division  
 of Lower Sonoran. A trace of Mesquite to S. from  
 head of Sonora to head of Magdalena River.

PENALTY FOR PRIVATE USE  
TO AVOID PAYMENT OF  
POSTAGE, \$300.

UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF BIOLOGICAL SURVEY.  
WASHINGTON.

OFFICIAL BUSINESS.

U. S. Department of Agriculture,

Washington, D. C.

Bureau of Biological Survey.

Caeraltos, Chihuahua, Mex., Oct 27-28.

Antelope	a few, maybe 200
Deer, mule, in hills,	
" quail, west in Mts.	
Sheep	none
<del>Rabbits</del> - 3	
Prairie dogs,	40 acres NW of Rancho
itellus spilosa	a few seen.
Peromyscus l. tamillo	1
Sigmodon burlandieri	abu.
Dipodomys spectabilis,	"
" merriami	"
Perodipus ardi	"
Perognathus flavus	2, com.
Thomomys talpaeus,	abu. 1
Mus musculus	"
Rattus	none
Neotoma	a few
Lynx	com
Vulpes d. mexicanus,	"
Urocyon	" in hills
Coyote	"
Melomys,	in Mts. "



